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U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555 Serial No. 16-002 MPS Lic/LES R0 Docket No. 50-336 License No. DPR-65

# DOMINION NUCLEAR CONNECTICUT, INC. MILLSTONE POWER STATION UNIT 2 LICENSEE EVENT REPORT 2015-003-00 VALID ACTUATION OF THE REACTOR PROTECTION SYSTEM

This letter forwards Licensee Event Report (LER) 2015-003-00 documenting an event at Millstone Power Station Unit 2 on November 8, 2015. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A).

If you have any questions or require additional information, please contact Mr. Thomas G. Cleary at (860) 444-4377.

Sincerely,

John R. Daugherty

Sité Vice President – Millstone

Attachments: 1

Commitments made in this letter: None

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cc: U.S. Nuclear Regulatory Commission Region I 2100 Renaissance Blvd, Suite 100 King of Prussia, PA 19406-2713

> R. V. Guzman NRC Project Manager Millstone Units 2 and 3 U. S. Nuclear Regulatory Commission One White Flint North Mail Stop O8 C-2 11555 Rockville Pike Rockville, MD 20852-2738

NRC Senior Resident Inspector Millstone Power Station

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### Verification of Accuracy Basis:

- 1. RCE 3015891, Unit 2 'C' RCP Oil Leak Causes Plant Shutdown
- 2. CR1017568, P40C, 'C' RCP Oil Leaking in the Lower Oil Reservoir.

Action Plan: None

Commitments made in this letter: None

Required Changes to the UFSAR or QA Topical Report: None

Serial No. 16-002 Docket No. 50-336 Licensee Event Report 2015-003-00

#### **ATTACHMENT**

LICENSEE EVENT REPORT 2015-003-00
VALID ACTUATION OF THE REACTOR PROTECTION SYSTEM

MILLSTONE POWER STATION UNIT 2 DOMINION NUCLEAR CONNECTICUT, INC.

#### NRC FORM 366 APPROVED BY OMB: NO. 3150-0104 EXPIRES: 01/31/2017 U.S. NUCLEAR REGULATORY COMMISSION (02-2014) Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by LICENSEE EVENT REPORT (LER) internet e-mail to Infocolledts.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC (See Page 2 for required number of 20503. If a means used to impose an information collection does not display a currently valid OMB digits/characters for each block) control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection. 1. FACILITY NAME 2. DOCKET NUMBER 3. PAGE Millstone Power Station Unit 2 05000336 1 OF 3 4. TITLE Valid Actuation of the Reactor Protection System **5. EVENT DATE** 6. LER NUMBER 7. REPORT DATE 8. OTHER FACILITIES INVOLVED FACILITY NAME DOCKET NUMBER SEQUENTIAL REV MONTH DAY YEAR MONTH DAY YEAR 05000 NUMBER FACILITY NAME DOCKET NUMBER 00 07 2016 11 80 2015 2015 -003 01 05000 9. OPERATING MODE 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) 50.73(a)(2)(i)(C) 50.73(a)(2)(vii) 20.2201(b) 20.2203(a)(3)(i) 20.2201(d) 20.2203(a)(3)(ii) 50.73(a)(2)(ii)(A) 50.73(a)(2)(viii)(A) 1 20.2203(a)(1) 20.2203(a)(4) 50.73(a)(2)(ii)(B) 50.73(a)(2)(viii)(B) 50.36(c)(1)(i)(A) 50.73(a)(2)(iii) 50.73(a)(2)(ix)(A) 20.2203(a)(2)(i) 10. POWER LEVEL 50.73(a)(2)(iv)(A) 50.73(a)(2)(x) 20.2203(a)(2)(ii) 50.36(c)(1)(ii)(A) 20.2203(a)(2)(iii) 50.36(c)(2) 50.73(a)(2)(v)(A) 73.71(a)(4) 73.71(a)(5) 20.2203(a)(2)(iv) 50.46(a)(3)(ii) 50.73(a)(2)(v)(B) 19.0 20.2203(a)(2)(v) ☐ 50.73(a)(2)(i)(A) 50.73(a)(2)(v)(C) OTHER Specify in Abstract below or in NRC Form 366A 50.73(a)(2)(v)(D) 20.2203(a)(2)(vi) 50.73(a)(2)(i)(B) 12. LICENSEE CONTACT FOR THIS LER

ICENSEE CONTACT

Thomas Cleary, Manager Nuclear Station Licensing

TELEPHONE NUMBER (Include Area Code)

(860) 444-4377

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT REPORTABLE TO EPIX MANU-MANUL REPORTABLE CAUSE SYSTEM COMPONENT CAUSE SYSTEM COMPONENT FACTURER FACTURER 14. SUPPLEMENTAL REPORT EXPECTED 15. EXPECTED MONTH DAY YEAR SUBMISSION YES (If yes, complete 15. EXPECTED SUBMISSION DATE) DATE

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On November 8, 2015 during reactor start-up from refueling outage 2R23 with the reactor in mode 1 at approximately 57.5 percent power the operators received indication of an oil leak on the 'C' reactor coolant pump (RCP) motor lower oil reservoir. The operators monitored the 'C' RCP oil level and bearing temperatures. Upon noting the RCP oil level dropping at a rate of approximately 1.7percent per hour and the lower RCP guide bearing temperature rising, the operators entered abnormal operating procedure (AOP) 2575, Rapid Downpower, and commenced a rapid downpower. The operators manually tripped the reactor at approximately 19percent power in accordance with AOP 2575 and entered emergency operating procedures. The reactor trip was uncomplicated. All safety systems operated as designed.

The cause of the valid actuation of the reactor protection system (RPS) was the operators manually tripping the reactor via the manual reactor trip push button switches. The AOP was entered due to an oil leak from the tubing to the level transmitter on the 'C' RCP motor lower oil reservoir. The tubing failure mechanism was determined to be high cyclic fatigue. Repairs were completed, the unit was restarted, and returned to service. Additional corrective actions are being taken in accordance with the station's corrective action program.

This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A), as any event or condition that resulted in manual or automatic actuation of any of the systems (RPS) listed in paragraph 10 CFR 50.73 (a)(2)(iv)(B).

NRC FORM 366A

#### U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104

EXPIRES: 01/31/2017

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Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE		
Millstone Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REV NO.	2 05 3		
		2015	- 003 -	00	2 OF 3		

#### NARRATIVE

#### 1. EVENT DESCRIPTION:

On November 8, 2015 during Millstone Power Station Unit 2 (MPS2) reactor start-up from refueling outage 2R23 with the reactor in mode 1 at approximately 57.5 % power, the operators received indication of an oil leak on the 'C' reactor coolant pump (RCP) motor lower oil reservoir. The operators monitored the 'C' RCP oil level and bearing temperatures. Upon noting the RCP oil level dropping at a rate of approximately 1.7% per hour and the lower RCP guide bearing temperature rising, the operators entered abnormal operating procedure (AOP) 2575, Rapid Downpower, and commenced a rapid down-power to return MPS2 to mode 3. The operators manually tripped the reactor at approximately 19% power in accordance with AOP 2575 and entered emergency operating procedures. The reactor trip was uncomplicated. All safety systems operated as designed.

The operators manually tripped the reactor, Dominion reported this event pursuant to 10 CFR 50.72(b)(2)(iv)(B) as any event or condition that results in actuation of the reactor protection system (RPS) when the reactor is critical except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation. (NRC Event Number: 51521).

The reactor trip was in response to degrading plant equipment, not preplanned, and the operator actions were directed by an AOP. Dominion is reporting this event pursuant to 10 CFR 50.73(a)(2)(iv)(A), as any event or condition that resulted in manual or automatic actuation of any of the systems (RPS) listed in paragraph 10 CFR 50.73 (a)(2)(iv)(B).

#### **BACKGROUND:**

The reactor trip pushbutton switches on the control panel causes interruption of the AC power to the control element drive mechanism (CEDM) power supplies. De-energizing the CEDM coils allows the shutdown and regulating Control Element Assemblies (CEAs) to drop into the core by gravity.

#### 2. CAUSE:

The cause of the valid actuation of the RPS was the operators manually tripping the reactor via the manual reactor trip push button. The AOP was entered due to an oil leak from the tubing to the level transmitter on the 'C' RCP motor lower oil reservoir. The tubing failure mechanism was determined to be high cyclic fatigue.

#### 3. ASSESSMENT OF SAFETY CONSEQUENCES:

The shutdown of MPS2 was conducted in accordance with plant procedure AOP 2575 and proceeded in an orderly controlled manner. As directed in the procedure, the reactor was manually tripped. The reactor trip was uncomplicated. All safety equipment operated as designed and as expected.

#### NRC FORM 366A

(02-2014)

## U.S. NUCLEAR REGULATORY COMMISSION LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET			3. PAGE			
Millstone Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REV NO.	2	OF	2
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#### NARRATIVE

#### 4. CORRECTIVE ACTION:

Repairs were completed, the unit was restarted, and returned to service. Additional corrective actions are being taken in accordance with the station's corrective action program.

#### 5. PREVIOUS OCCURRENCES:

- MPS2, & MPS3 LER 2014-006-00, Millstone Power Station Dual Unit Reactor Trip on Loss of Offsite Power
- MPS2, LER 2013-004-00, Reactor Trip While Backwashing 'D' Waterbox
- MPS3 LER 2013-007-00, Reactor Trip on Low-Low Steam Generator Level

#### 6. Energy Industry Identification System (EIIS) codes:

- Reactor Coolant System AB
- Control Rod Drive System AA
- Pump P
- Motor MO
- Transmitter, indicating level LIT
- Tubing TBG